



An AI/Semiconductor Stock that the Market Is Missing

It's not often investors have the opportunity to get into a business that provides the key components to the booming AI industry (i.e. [picks and shovels](#)), holds management accountable for creating true shareholder value, and trades at a discount. This week's [Long Idea](#), Arrow Electronics (ARW: \$117/share) could be that opportunity.

ARW offers favorable Risk/Reward based on the company's:

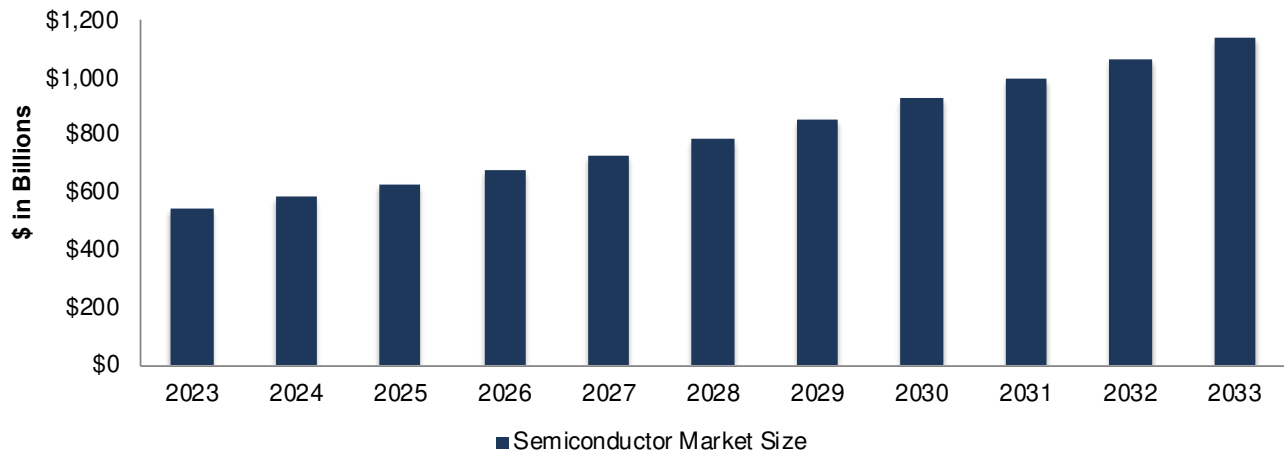
- position as the largest electronic components distributor in the world,
- executive compensation aligned with ROIC,
- strong cash flow to support share buybacks, and
- cheap stock valuation.

AI Driving Huge Demand for Semiconductors

It should be no surprise that semiconductor usage is expected to soar in the coming years. Just look around us. Nearly every consumer electronic device now connects to the internet, wireless connectivity and automation are being built into devices from cars to factory robots, and artificial intelligence, even in its early uses, requires massive computing and electrical power. According to [Precedence Research](#), the global semiconductor market is projected to grow 7.6% compounded annually from 2023 – 2033. See Figure 1.

Figure 1: Global Semiconductor Market Forecast: 2023 – 2033

Semiconductor Market Poised for Growth



Sources: [Precedence Research](#) and New Constructs, LLC

Not Your Typical Reseller

Arrow Electronics provides products and services to manufacturers of industrial equipment, including machine tools, factory automation and robotic equipment, as well as automotive and transportation, telecommunications, and consumer electronics markets.

As a reseller of electronic equipment, it would be easy to lump Arrow Electronics into a board category of technology retailer (or reseller). This categorization would imply that Arrow Electronics simply buys electronic components at one price, marks them up and sells them, as a traditional retailer.

Such a categorization ignores the scale, logistics, and sophisticated solutions Arrow Electronics provides customers. Arrows offerings not only create an increased engagement (more revenue) but also increase switching costs (deeper integration).



Broad and Diversified Offerings Create Wide Moat

Arrow Electronics uses its vast distribution footprint to source and deliver hundreds of thousands of electronic components, including the latest semiconductor technologies, to its customers. The company notes in its 10-K that most of its customers require delivery on schedules or volumes that are not available directly from manufacturers, which further increases the value creation.

Beyond simply sourcing parts, Arrow provides product component integration (known as demand creation), design engineering, and supply chain management.

- Demand creation services provide registered engineered designs/schematics showing customers how they can use components in future products.
- Design engineering services include device programming, prototyping, manufacturing efficiency services such as component modification, kitting and packaging, fan assembly, and more. Additionally, the company provides a turnkey manufacturing service in which it will source, manage, deliver and compile materials such as semiconductors, passives, raw printed circuit boards, plastics, metals, and more to contract manufacturers.
- Arrow is also increasing its supply-chain-as-a-service offerings to include procurement, warehousing, and logistics support to optimize a customer's entire supply chain for building data center cooling and power products, medical devices, automated robotics, and much more.

Lastly, Arrow also provides enterprise computing solutions. This offering focuses on helping its reseller and managed service providers build IT solutions to meet their end customer needs. Services include engineering and integration support, marketing resources, and hardware/software training.

AI Upside with Less Risk

Put together, Arrow Electronics benefits from growth in the AI/semiconductor industry without having to take the expensive risk of developing the latest and greatest chip. Instead, it sits between those making the components and those that need to develop, build, and deliver products using those components to wide-ranging end markets. In other words, Arrow's expertise enables their customers to get the best AI/chips/components to build their products without having to be AI/chips/components experts from a single source.

We think demand for this value-added service will grow at least as fast as the AI market as the sophistication of that market advances at a faster pace than most manufacturers can keep.

Executive Compensation Is Tied to Creating Real Value

"The company's financial objectives are to... allocate and deploy capital effectively so that return on invested capital exceeds the company's cost of capital, and increase return on invested capital." (underline added)

The quote above is on Page 3 of Arrow Electronics' 2023 10-K. Most importantly, this financial objective is not just window dressing. Management is held accountable to that goal through the company's executive compensation plan.

Tying executive compensation to ROIC is also one of the clues we look for to know if we can trust a company and its management – as detailed in our [recent training](#). By evaluating executive compensation plans, investors can find companies, such as Arrow Electronics, that directly align executives' interests with shareholders' interests.

Arrow Electronics' long-term incentive programs include a performance share award, 40% of which is tied to the three-year average return on invested capital (ROIC) in excess of its three-year weighted average cost of capital (WACC). The company believes use of ROIC minus WACC "incentivizes prudent use of capital and rewards value creation." Importantly, Arrow Electronics' [Proxy Statement](#) notes "there will be no payout if ROIC minus WACC is less than zero".

There is [a strong correlation between improving ROIC and increasing shareholder value](#). Arrow Electronics' belief in the importance of ROIC starts from the beginning of its financial statements and is carried through to executives' incentives.

When we analyze the company's ROIC using our superior fundamental data, we find that Arrow Electronics has successfully generated an ROIC greater than its WACC in each of the last 14 years and the TTM period. In addition, the company has generated positive [economic earnings](#) in every period over the same time.



Large Diversified Customer/Supplier Base Provides Advantages

As the [largest electronic component distributor](#) in the world, with over 200,000 customers, Arrow Electronics' revenue is highly diversified. In 2023, no single customer accounted for more than 2% of the company's sales and the largest supplier accounted for 10% of the company's sales. Diversified revenue streams and customer relationships minimizes the concentration risk that one large account could materially and negatively impact the business.

Given its size and scale, Arrow Electronics is also able to obtain contractual provisions to protect the company from product obsolescence and price erosion (a big concern in the technology industry).

Under the terms of these agreements, suppliers are required to credit the company for reduction in suppliers' list prices. At the end of 2023, approximately 55% of Arrow's inventories were covered by such a provision.

Additionally, the company has agreements in place for 60% of its inventory (as of December 2023) in which a supplier that wants to terminate a distribution agreement would be required to purchase the total amount of its products back from Arrow Electronics. These deals provide protection in an ever-changing technology landscape.

#2 Margins In the Industry

As the largest electronic components distributor, Arrow Electronics is able to negotiate with suppliers and customers from a position of power, which provides two competitive advantages. First, the company can protect margins by only accepting deals that meet management's standards of profitability (why executive compensation tied to ROIC matters). Second, high margins provide Arrow with greater flexibility in a downturn, as the company can sacrifice on price more than competitors to retain customers and remain profitable.

Per Figure 2, Arrow Electronics has the second highest NOPAT margin among its peers, and one of the highest ROICs of the group as well. The only peer with higher margins is Insight Enterprises (NSIT), a previous Long Idea. We closed the NSIT position in [April 2023](#) after its valuation skyrocketed and the stock outperformed the S&P 500 by 101%.

Figure 2: Arrow Electronics' Profitability Vs. Peers: TTM ended 1Q24

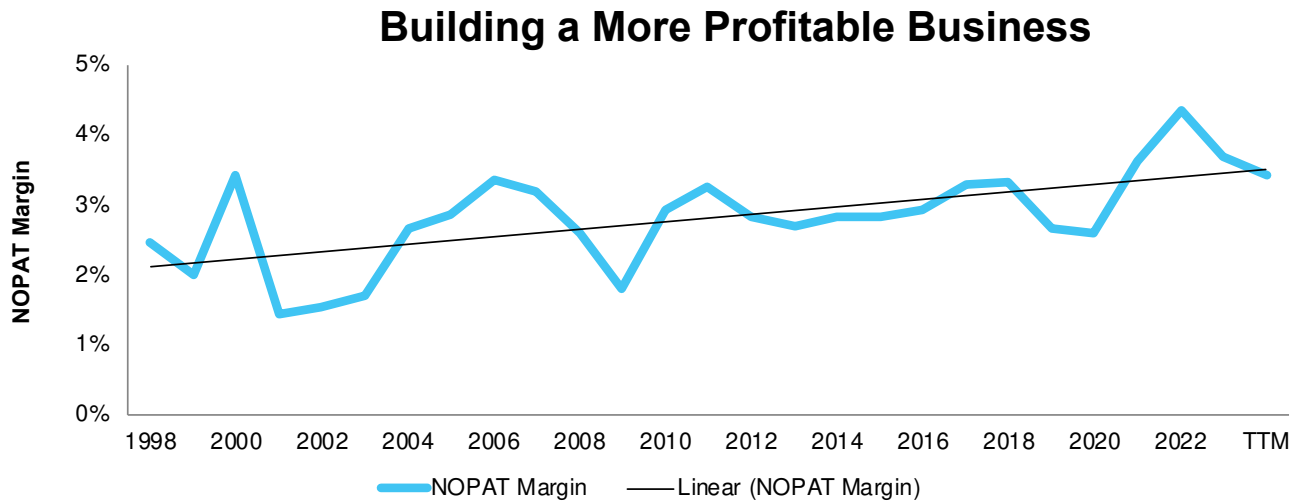
Ticker	Company Name	IC Turns	ROIC	NOPAT Margin
NSIT	Insight Enterprises	2.8	10%	3.7%
ARW	Arrow Electronics	2.3	8%	3.4%
AVT	Avnet Inc.	2.1	7%	3.3%
CNXN	PC Connection	3.7	10%	2.7%
SPRS	Surge Components	2.8	6%	2.2%
SCSC	ScanSource	2.4	5%	1.9%
SNX	TD SYNEX	3.8	7%	1.8%

Sources: New Constructs, LLC and company filings

Per Figure 3, management has also improved the business through economic cycles so that margins have higher floors during troughs and higher ceilings during booms.



Figure 3: Arrow Electronics' NOPAT Margin: 1998 – TTM ended 1Q24



Sources: New Constructs, LLC and company filings

Return to Growth On the Horizon

While long-term semiconductor growth is projected to remain strong, there will still be some cyclicity. After supply shortages during COVID-19, companies accumulated excess inventory that is still being worked through and creating a prolonged headwind to revenue growth. However, recent indicators, e.g. the AI boom, point to improving demand, which could drive more growth in the future.

In 1Q24, Arrow's management noted continued weakness in demand across many markets but noted that its customer base remains stable. The company's backlog is trending downward, which indicates shorter lead times and market data suggest inventory levels at OEMs are declining both sequentially and year-over-year. As Arrow Electronics' CEO Sean Kerins [stated](#):

"while it's difficult to precisely predict when the demand environment will accelerate, the industry fundamentals haven't changed, and we're confident in its long-standing cyclical nature for a return to growth in the near term."

Such uncertainty has depressed Arrow's stock price, which provides investors an opportunity.

Strong Fundamentals

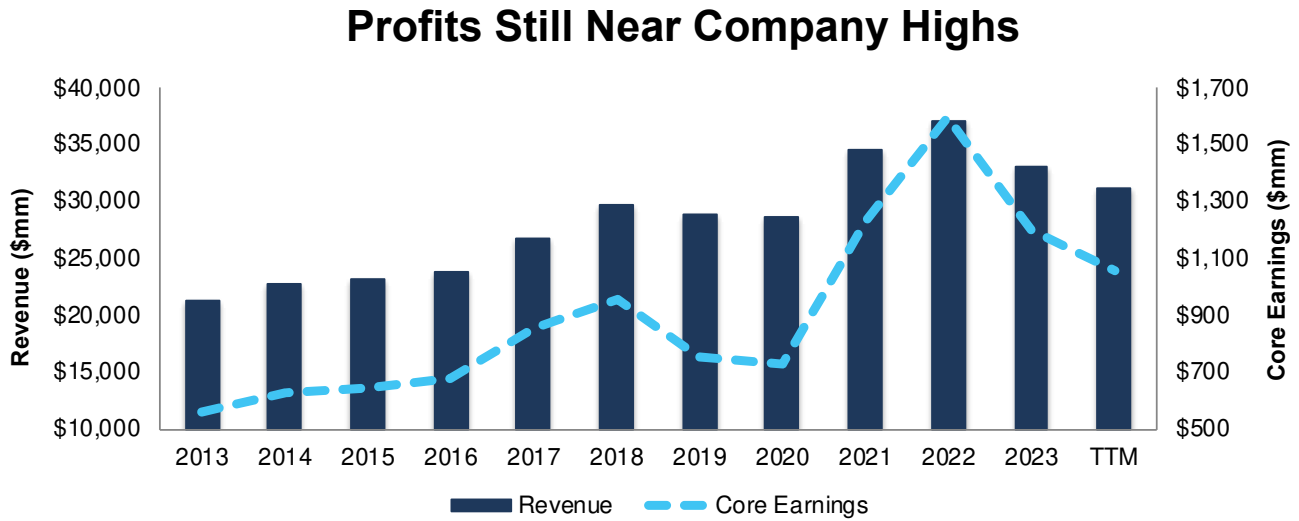
Arrow Electronics has leveraged its position as an electronic components and services provider to build a growing and profitable business.

Though profits have fallen since the post-COVID demand boom (after supply chain shortages during COVID), they remain near record highs.

Since 2013, Arrow Electronics has grown revenue and [Core Earnings](#) by 4% and 6% compounded annually, respectively. Since 2018, Core Earnings have grown 2% compounded annually. See Figure 4.



Figure 4: Arrow Electronics' Revenue and Core Earnings: 2013 – TTM Ended 1Q24



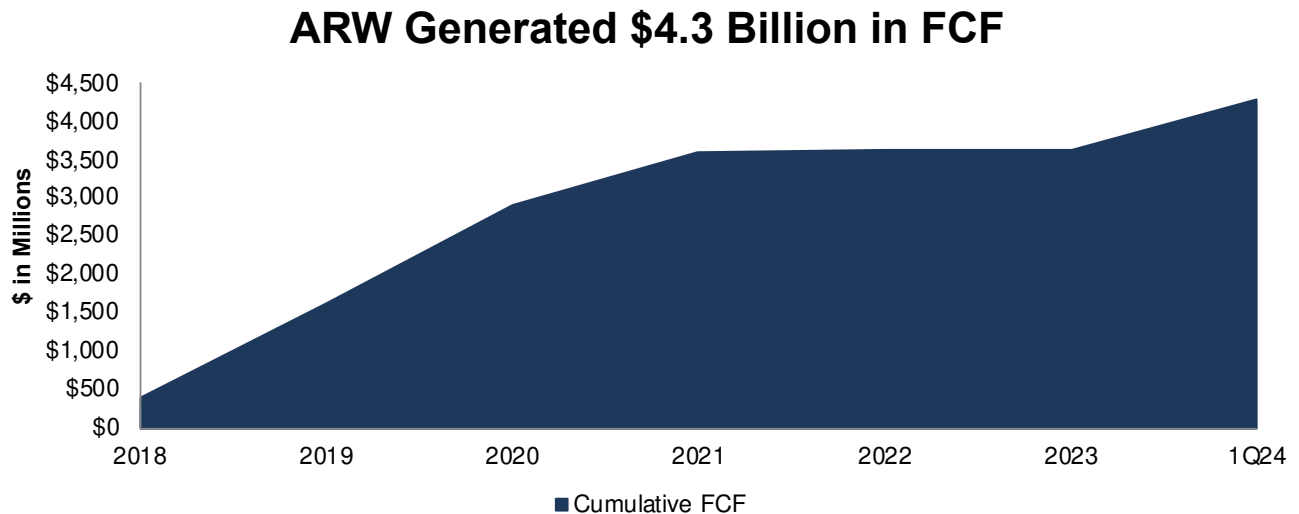
Sources: New Constructs, LLC and company filings

Strong and Rising Free Cash Flows

Arrow Electronics' large and rising free cash flow (FCF) shows the company's ability to meet customer needs and provide value added services while maintaining strong cash flows.

Per Figure 5, Arrow Electronics has generated a cumulative \$4.3 billion in FCF since 2018, which represents 39% of its [enterprise value](#).

Figure 5: Arrow Electronics Free Cash Flow: 2018 – 1Q24



Sources: New Constructs, LLC and company filings

Buybacks Drive Capital Return of 5.6%

While Arrow Electronics does not pay a dividend, it does return capital to shareholders through share repurchases. Arrow Electronics' rising FCF supports such repurchases.

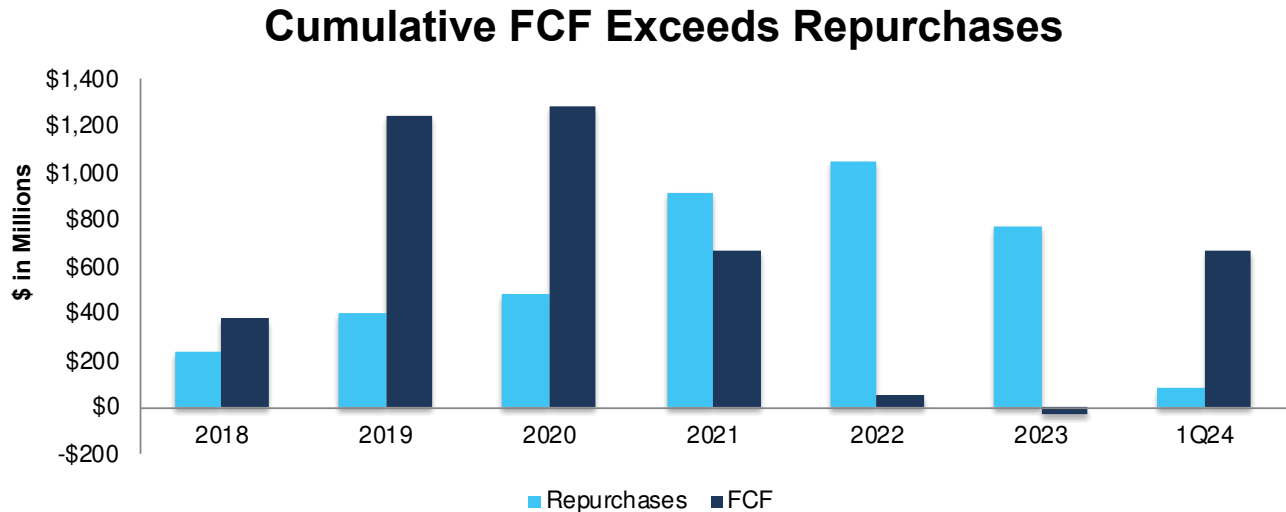
From 2018 through 1Q24, the company repurchased \$4.0 billion worth of shares and generated \$4.2 billion in FCF over the same time.



As of March 31, 2024, the company is authorized to repurchase another \$475 million worth of shares. If Arrow Electronics maintains its repurchase rate from 1Q24 through the rest of the year, it would repurchase over \$350 million in shares in 2024.

Such repurchase activity would provide investors a repurchase yield of 5.6%. See Figure 6.

Figure 6: Arrow Electronics' FCF vs. Share Repurchases: 2018 – 1Q24



Sources: New Constructs, LLC and company filings

Shares Have 100%+ Upside

At its current price of \$117/share, Arrow Electronics has a price-to-economic book value ([PEBV](#)) ratio of 0.6, which means the market expects profits to permanently fall 40% from TTM ended 1Q24 levels. Below, we use our [reverse discounted cash flow \(DCF\)](#) model to further quantify how low the expectations baked into Arrow Electronics' stock price are. We also present the upside potential in the stock even if the company grows NOPAT below projected industry growth rates.

DCF Scenario 1: to Justify the Current Stock Price

We assume Arrow Electronics':

- NOPAT margin falls to 2.6% (from 3.4% in the TTM and 3.2% 10-year average), and
- revenue falls <1% compounded annually from 2024 – 2033 (below compound annual growth rate of 5% since 1998 and 4% since 2013).

In this [scenario](#), Arrow Electronics' NOPAT falls 4% compounded annually through 2033, and the stock would be worth \$118/share today – nearly equal to the current price. For reference, Arrow Electronics has grown NOPAT by 6% compounded annually since 2013 and 2% compounded annually since 2018.

DCF Scenario 2: Shares Have 100%+ Upside with Below Industry Growth Rates

If we instead assume Arrow Electronics':

- NOPAT margin falls to 3.2% (equal to 10-year average and below 3.4% TTM and 5-year average) from 2024 to 2033,
- revenue grows by consensus estimates in 2024 (-10%) and 2025 (6%), and
- revenue grows 4.5% each year thereafter through 2033 then,

ARW would be worth at least [\\$234/share](#) – a 100%+ upside to the current price. In this scenario, Arrow Electronics' NOPAT grows 1.5% compounded annually through 2033, or below the company's NOPAT CAGR over the past five years (+2%), ten years (+6%), and since 1998 (+7%).



DCF Scenario 3: Shares Have 200%+ Upside if Historical Growth Maintains

Below we include a scenario that assumes Arrow's growth matches the expected growth of the semiconductor market to quantify just how undervalued shares currently are.

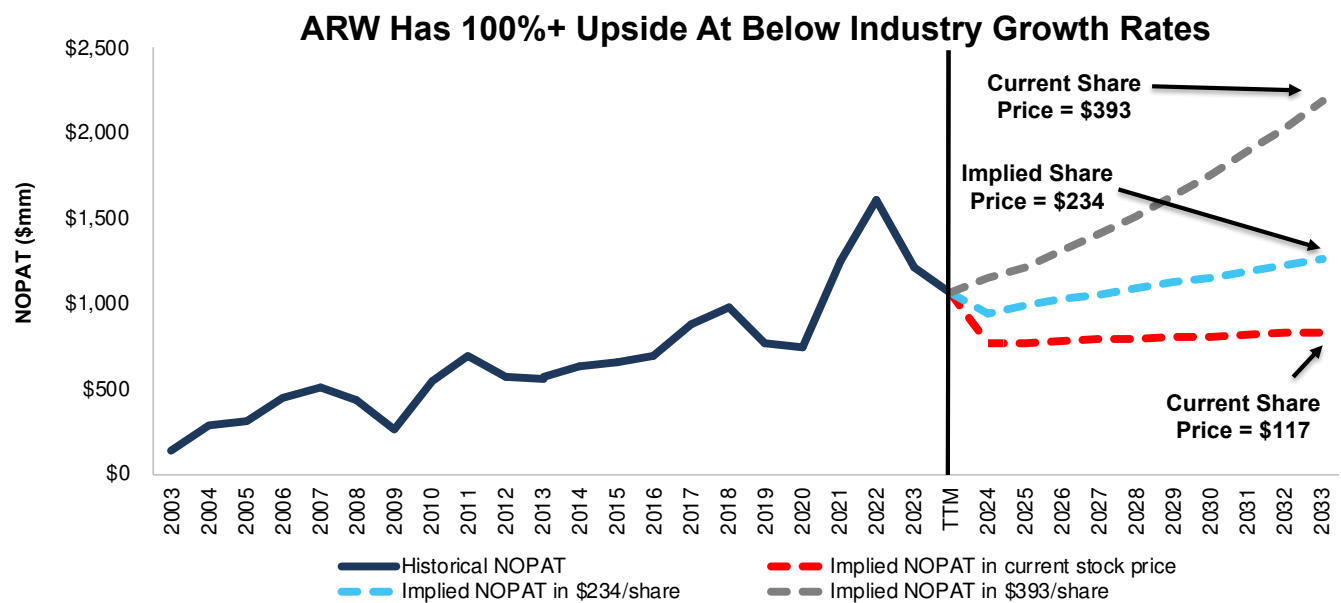
If we instead assume Arrow Electronics':

- NOPAT margin improves to 3.9% (3-year average) from 2024 to 2033,
- revenue grows by consensus estimates in 2024 (-10%) and 2025 (6%), and
- revenue grows 7.6% each year thereafter through 2033 then,

ARW would be worth at least [\\$393/share](#) – a 236%+ upside to the current price. In this scenario, Arrow Electronics' NOPAT grows 6% compounded annually through 2033, or equal to the company's NOPAT CAGR over the past ten years.

Figure 7 compares Arrow Electronics' historical NOPAT to the NOPAT implied in each of the above DCF scenarios.

Figure 7: Arrow Electronics' Historical and Implied NOPAT: DCF Valuation Scenarios



Sources: New Constructs, LLC and company filings.

Sustainable Competitive Advantages Will Drive Shareholder Value Creation

Here's a summary of why we think the moat around Arrow Electronics' business will enable it to continue to generate higher NOPAT than the current market valuation implies.

- unmatched scale to connect customers and suppliers,
- specialized expertise and services to meet sophisticated client needs,
- margins top nearly all peers and provide flexibility through all cycles, and
- strong and consistent profit growth.

What Noise Traders Miss with Arrow Electronics

These days, fewer investors focus on finding quality capital allocators with shareholder-aligned corporate governance. Due to the [proliferation of noise traders](#), the focus is on short-term technical trading trends while [more reliable fundamental research](#) is overlooked. Here's a quick summary of what noise traders are missing:

- AI is driving a return to growth,
- projected strong growth in semiconductor usage over next decade, and
- electronic components are the picks and shovels for OEMs and those bringing tech/automation to their products.



Top Line Beats Could Send Shares Higher

Arrow Electronics has beaten earnings estimates in each of the past 12 quarters. However, the company has missed revenue expectations in each of the past four quarters, as overstocked inventories at OEMs and customers has weighed on the top line. A bottom-line beat may not move the needle, though we view it as likely. Arrow Electronics earns a Beat [Earnings Distortion Score](#), our proprietary and proven-superior measure for the likelihood of an earnings beat or miss in the coming quarter.

Instead, a revenue beat, which would be possible if the early signs of a demand turnaround (noted earlier in report) take hold, could reinvigorate momentum in Arrow Electronics' stock. Such a beat would remind investors that this company is poised to benefit from multiple macro trends driving increased use of semiconductors and could send shares higher.

Insider Trading and Short Interest Trends

Over the past 12 months, [insiders](#) have purchased 85,036 shares and have sold 47,726 shares for a net effect of 37,310 shares purchased. These sales represent <1% of shares outstanding.

There are currently 2.1 million shares sold short, which equates to 4% of shares outstanding and just over four days to cover.

Attractive Funds That Hold ARW

The following funds receive an Attractive-or-better rating and allocate significantly to ARW:

1. Hotchkis & Wiley Value Opportunities Fund (HWAIX, HWACX, HWAZX) – 4.9% allocation and Attractive rating
2. LeaderShares AlphaFactor Tactical Focused ETF (LSAT) – 3.4% allocation and Attractive rating
3. Cullen Value Fund (CVLEX, CVLFX, CVLVX) – 3.1% allocation and Very Attractive and Attractive rating depending upon share class

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Disclosure: David Trainer, Kyle Guske II, and Hakan Salt receive no compensation to write about any specific stock, style, or theme.

Questions on this report or others? Join our [online community](#) and connect with us directly.



It's Official: We Deliver the Best Fundamental Data in the World

Many firms claim their research is superior, but none of them can prove it with independent studies from highly-respected institutions as we can. Three different papers from both the public and private sectors show:

1. The stock market is missing footnotes – and only we have that critical data.
2. Legacy fundamental datasets suffer from significant inaccuracies, omissions, and biases.
3. Our proprietary drives novel alpha. Our measures of [Core Earnings](#) and [Earnings Distortion](#) materially improve stock picking and forecasting of profits.

Best Fundamental Data in the World

In [The Journal of Financial Economics](#), a top peer-reviewed journal, [Core Earnings: New Data & Evidence](#) proves our Robo-Analyst technology overcomes material shortcomings in legacy firms' data collection processes to provide superior [fundamental data](#), [earnings](#) models, and [research](#). More [details](#).

Key quotes from the paper:

- “[New Constructs’] *Total Adjustments* differs significantly from the items identified and excluded from Compustat’s adjusted earnings measures. For example... 50% to 70% of the variation in *Total Adjustments* is not explained by S&P Global’s (*SPGI*) *Adjustments* individually.” – pp. 14, 1st para.
- “A final source of differences [between New Constructs’ and S&P Global’s data] is due to data collection oversights...we identified cases where Compustat did not collect information relating to firms’ income that is useful in assessing core earnings.” – pp. 16, 2nd para.

Superior Models

Ernst & Young features the superiority of our ROIC, NOPAT and Invested Capital research to Capital IQ & Bloomberg’s in [Getting ROIC Right](#). See the [Appendix](#) for direct comparison details.

Key quotes from the paper:

- “...an accurate calculation of ROIC requires more diligence than often occurs in some of the common, off-the-shelf ROIC calculations. Only by scouring the footnotes and the MD&A [as New Constructs does] can investors get an accurate calculation of ROIC.” – pp. 8, 5th para.
- “The majority of the difference...comes from New Constructs’ machine learning approach, which leverages technology to calculate ROIC by applying accounting adjustments that may be buried deeply in the footnotes across thousands of companies.” – pp. 4, 2nd para.

Superior Stock Ratings

Robo-Analysts’ stock ratings outperform those from human analysts as shown in this [paper](#) from Harvard Business School. Bloomberg features the paper [here](#).

Key quotes from the paper:

- “the portfolios formed following the buy recommendations of Robo-Analysts earn abnormal returns that are statistically and economically significant.” – pp. 6, 3rd para.
- “Our results ultimately suggest that Robo-Analysts are a valuable, alternative information intermediary to traditional sell-side analysts.” – pp. 20, 3rd para.

Our mission is to provide the best fundamental analysis of public and private businesses in the world and make it affordable for all investors, not just Wall Street insiders.

We believe every investor deserves to know the whole truth about the profitability and valuation of any company they consider for investment. More details on our cutting-edge technology and how we use it are [here](#).



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